

## 7-1: Power Functions

How do powers apply to the real world?

*Powering/exponentiation:*

*Base:*

*Exponent:*

*Example 1:* Matt Mitarnowski drives to school. Suppose there is a probability  $D$  that he will run into a delay on the way.

a. What is the probability  $y$  that he will be delayed four days in a row?

b. Make a table for  $D = \{.1, .2, .3, \dots, .9, 1\}$

c. What value of  $D$  will give a probability of .5 that Matt will be delayed four days in a row?

*Power function:*

*Identity function:*

*Squaring function:*

*Cubing function:*

*Fourth power function:*

*Fifth power function:*

### Properties of Power Functions

1.

2.

3.

a.

b.

4.

a.

b.

*Homework:*

***“If we all did the things we are capable of doing, we would literally  
astound ourselves.” - Thomas A. Edison***